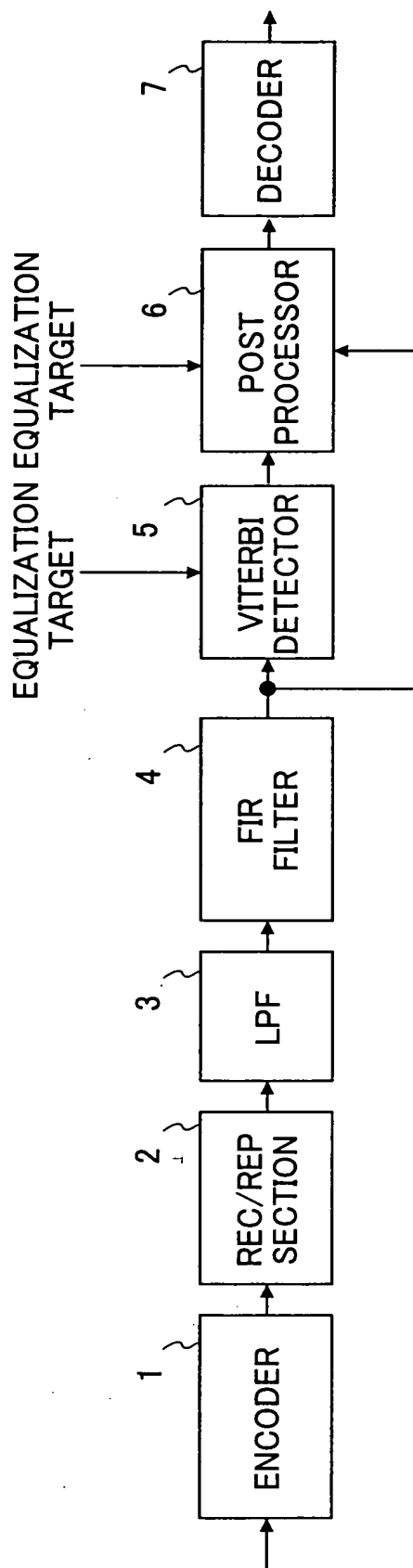
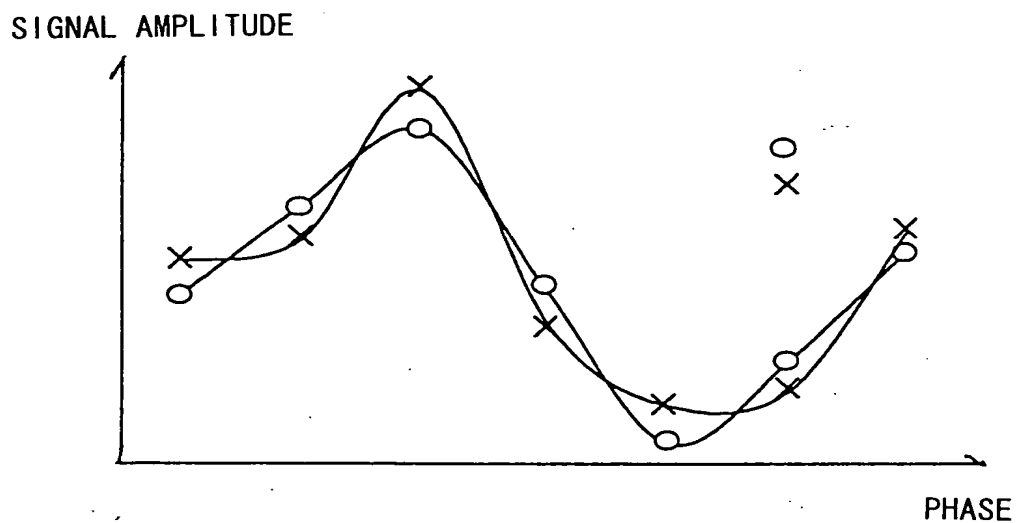


FIG.1



15

FIG. 2



000111-080201

FIG.3

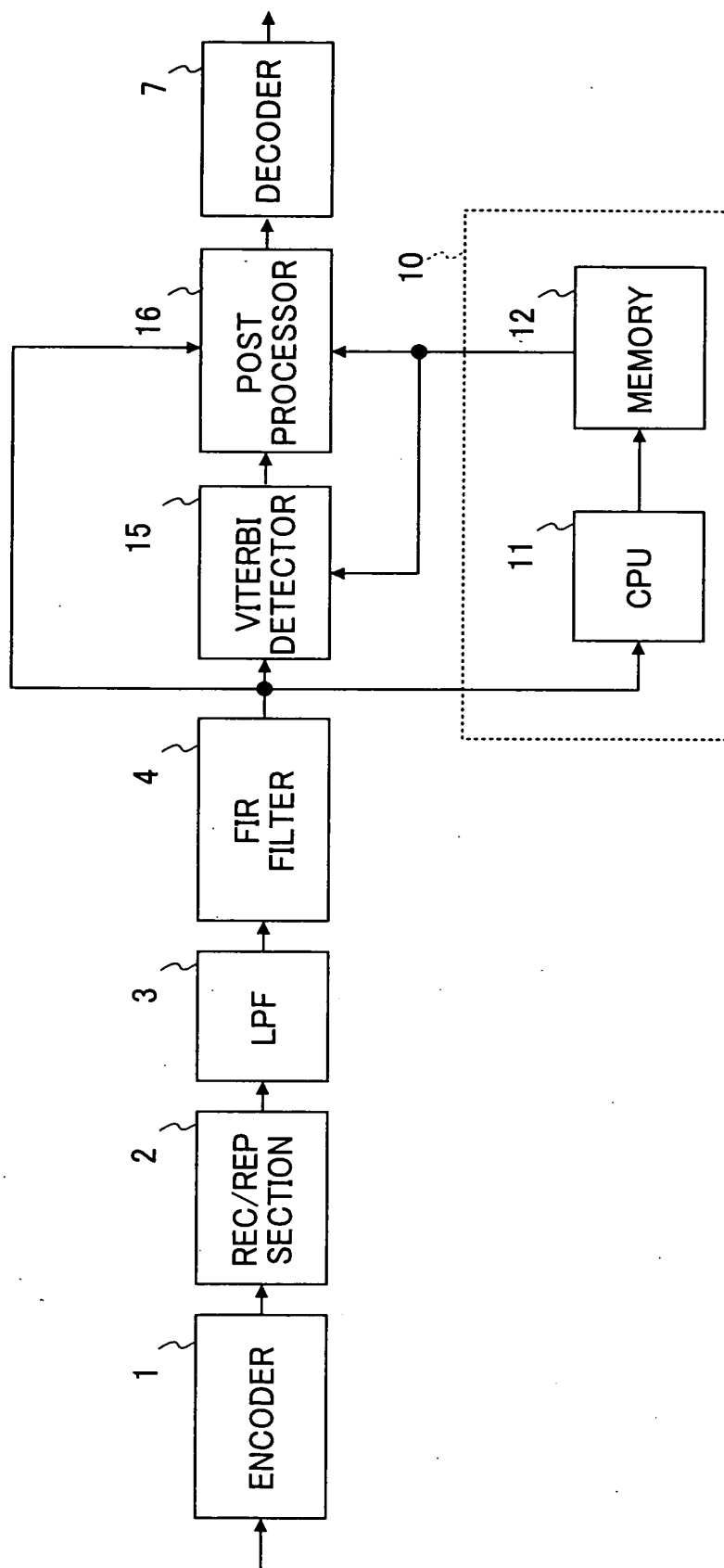


FIG.4

a <sub>k</sub> -3a <sub>k</sub> -2a <sub>k</sub> -1a <sub>k</sub>	EQUALIZATION OUTPUT b <sub>k</sub>	
	IDEAL EQUALIZATION VALUE	AVERAGE VALUE OF ACTUAL EQUALIZED WAVEFORM
0000	0	$\mu_0$
0001	+1	$\mu_1$
0010	+1	$\mu_2$
0011	+2	$\mu_3$
0100	-1	$\mu_4$
0101	0	$\mu_5$
0110	0	$\mu_6$
0111	+1	$\mu_7$
1000	-1	$\mu_8$
1001	0	$\mu_9$
1010	0	$\mu_{10}$
1011	+1	$\mu_{11}$
1100	-2	$\mu_{12}$
1101	-1	$\mu_{13}$
1110	-1	$\mu_{14}$
1111	0	$\mu_{15}$

000111.00000

FIG.5

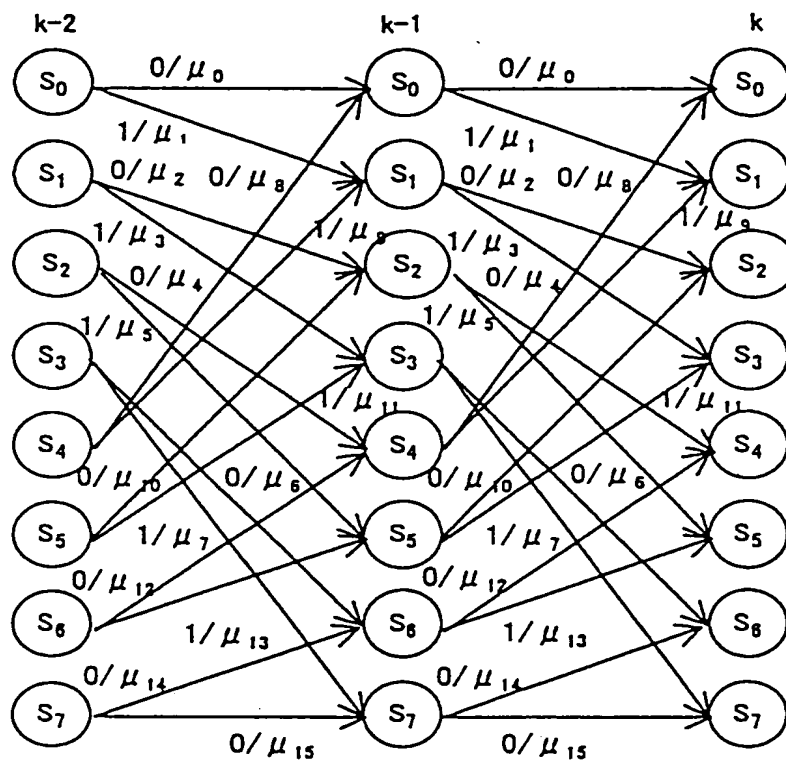
ak-2ak-1ak	STATE
000	S <sub>0</sub>
001	S <sub>1</sub>
010	S <sub>2</sub>
011	S <sub>3</sub>
100	S <sub>4</sub>
101	S <sub>5</sub>
110	S <sub>6</sub>
111	S <sub>7</sub>

000111 000201  
102000 111100



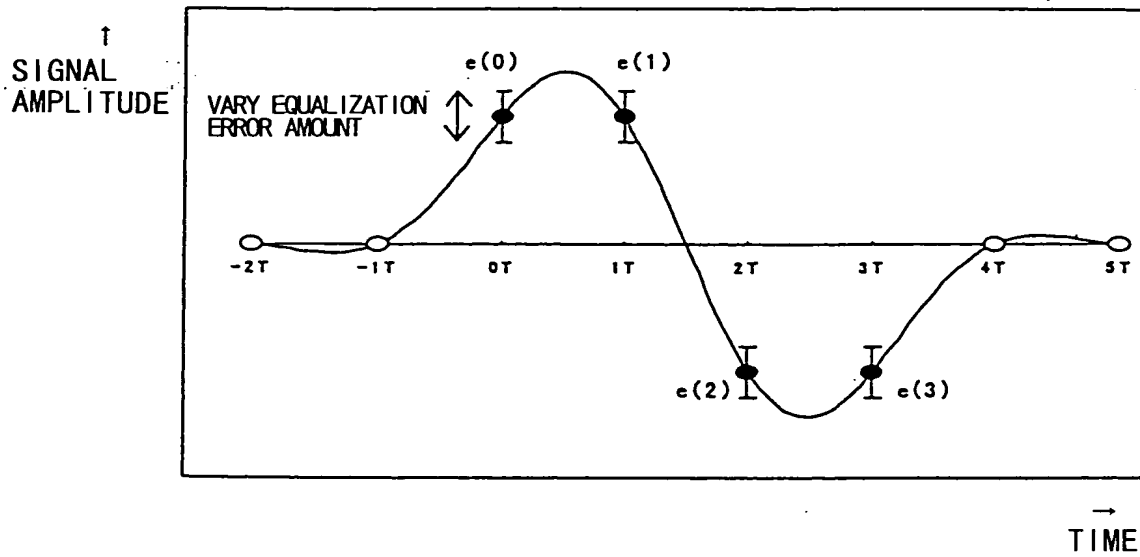
STATE OF 1 BIT BEFORE	PRESENT STATE			PRESENT EQUALIZATION OUTPUT $b_k$				
				IDEAL VALUE		AVERAGE VALUE OF ACTUAL EQUALIZED WAVEFORM		
	$a_k$	0	1	$a_k$	0	1		
$S_0$	$S_0$	$S_1$	0	+1	$\mu_0$	$\mu_1$		
$S_1$	$S_2$	$S_3$	+1	+2	$\mu_2$	$\mu_3$		
$S_2$	$S_4$	$S_5$	-1	0	$\mu_4$	$\mu_5$		
$S_3$	$S_6$	$S_7$	0	+1	$\mu_6$	$\mu_7$		
$S_4$	$S_0$	$S_1$	-1	0	$\mu_8$	$\mu_9$		
$S_5$	$S_2$	$S_3$	0	+1	$\mu_{10}$	$\mu_{11}$		
$S_6$	$S_4$	$S_5$	-2	-1	$\mu_{12}$	$\mu_{13}$		
$S_7$	$S_6$	$S_7$	-1	0	$\mu_{14}$	$\mu_{15}$		

FIG. 7



000111 000001

FIG. 8



	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
0	0	1	4	9	16	25	36	49	64	81	100	121	144	169	196	225	256	289	324	361	400	441	484	529	576	625	676	729	784	841	900	961	1024	1089	1156	1225	1296	1369	1444	1521	1600	1681	1764	1849	1936	2025	2116	2209	2304	2401	2500	2601	2704	2809	2916	3025	3136	3249	3364	3481	3600	3721	3844	3969	4096	4225	4356	4489	4624	4761	4900	5041	5184	5329	5476	5625	5776	5929	6084	6241	6400	6561	6724	6889	7056	7225	7396	7569	7744	7921	8100	8281	8464	8649	8836	9025	9216	9409	9604	9801	10000



FIG. 9

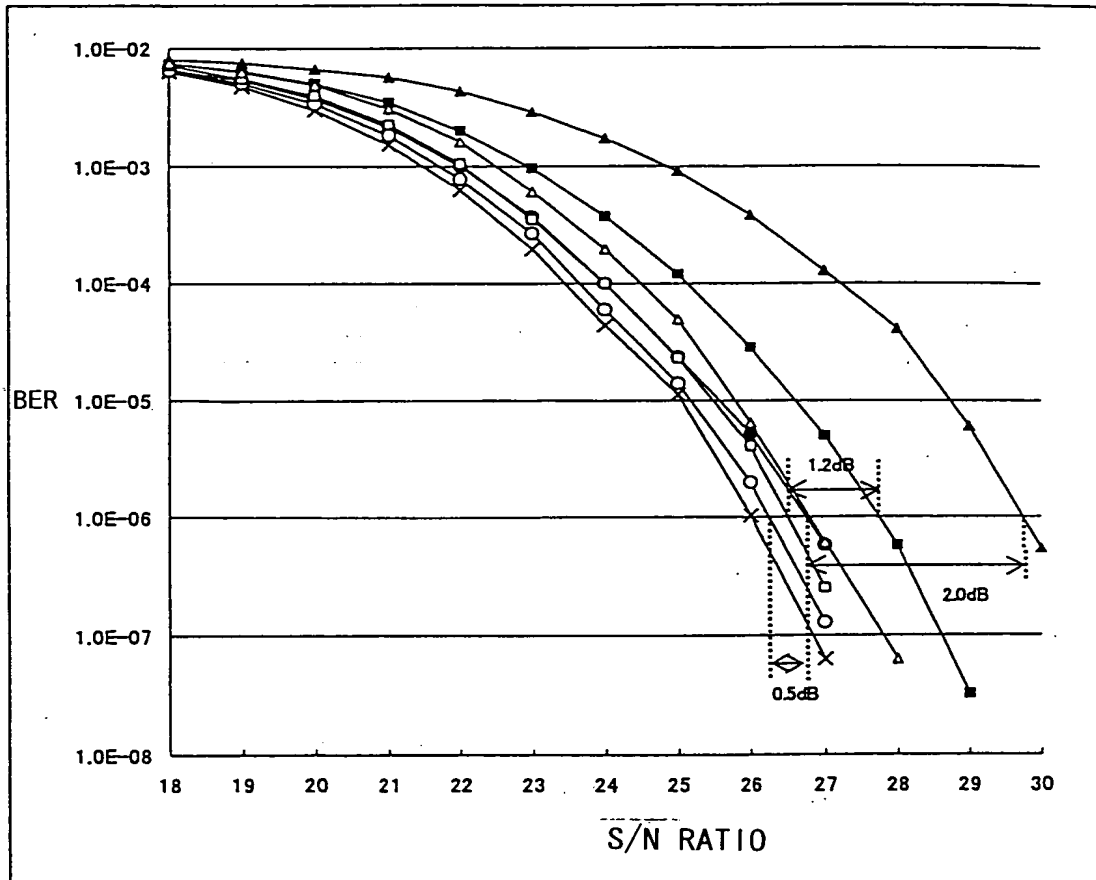


FIG.10

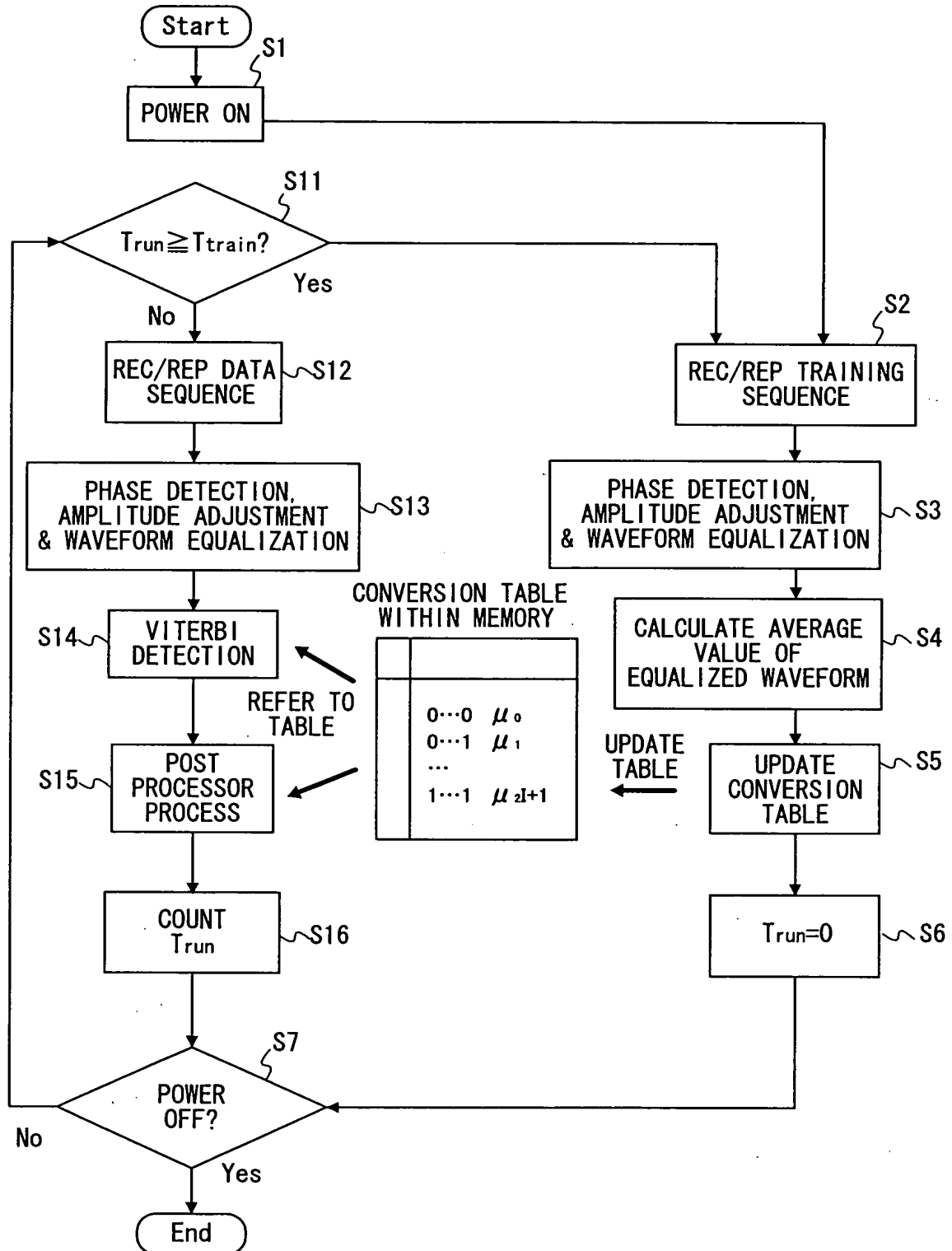


FIG.11

$a_{k-2}$	$a_{k-1}$	$a_k$	COMPENSATION AMOUNT
0	0	1	—
0	1	1	$T_{01}$
1	0	1	$T_{10}$
1	1	1	$T_{11}$

0941.65729 (312) 360 0080

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	

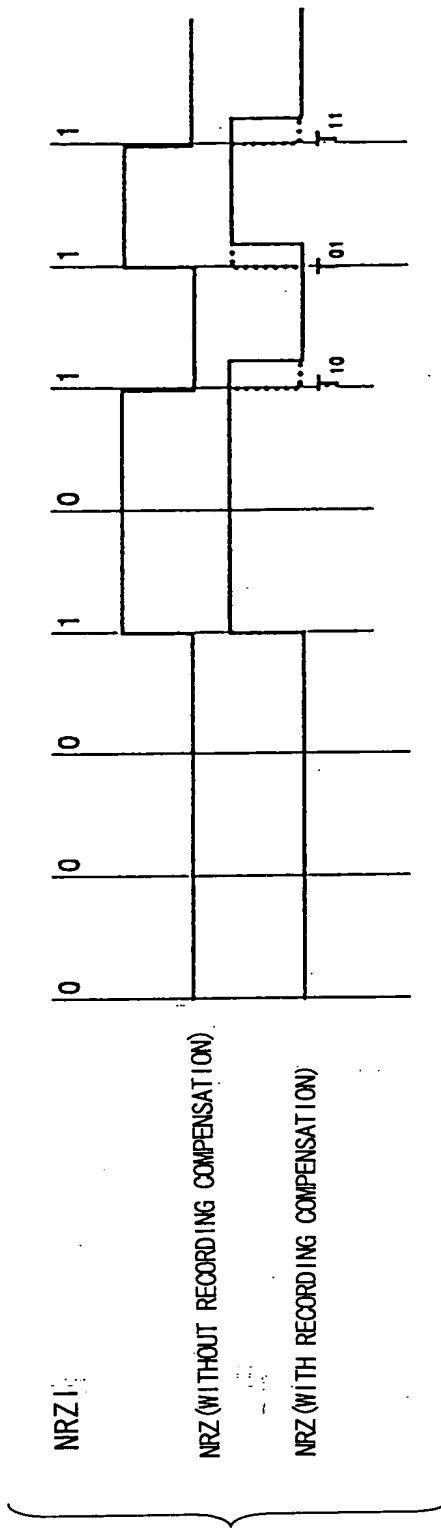
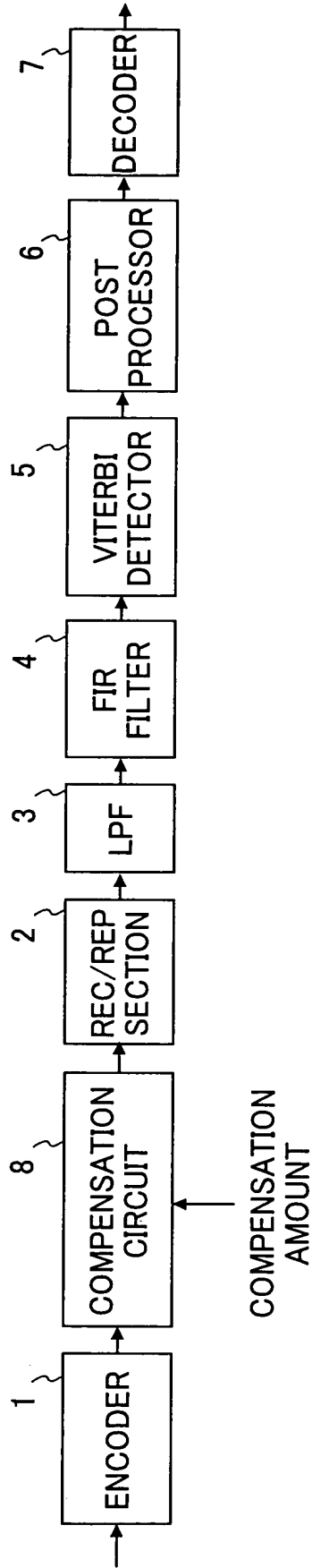


FIG. 12

FIG.13



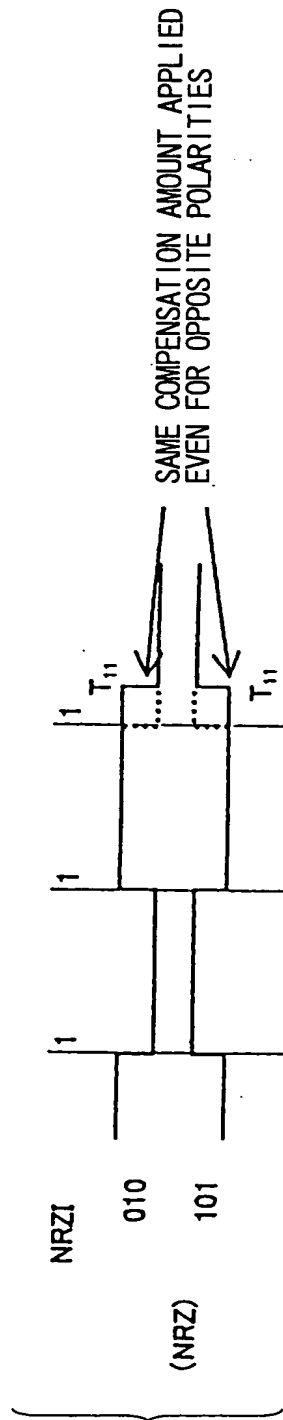


FIG. 14

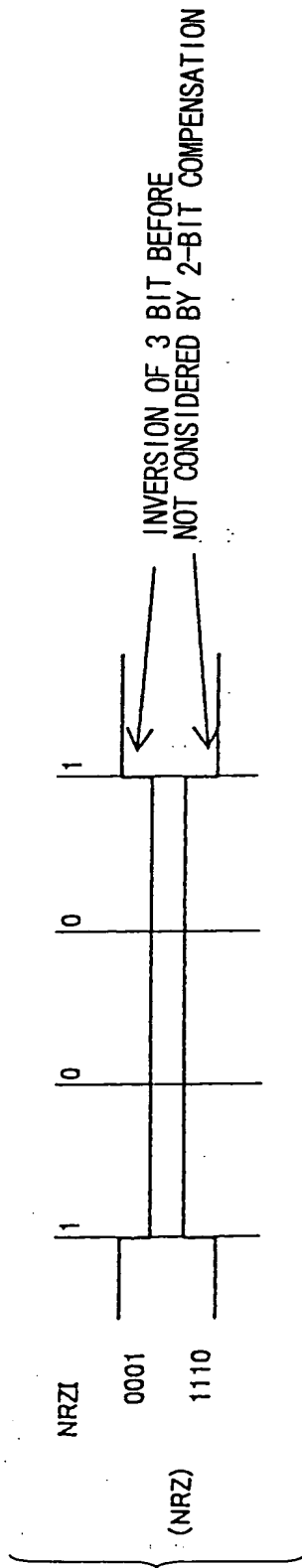
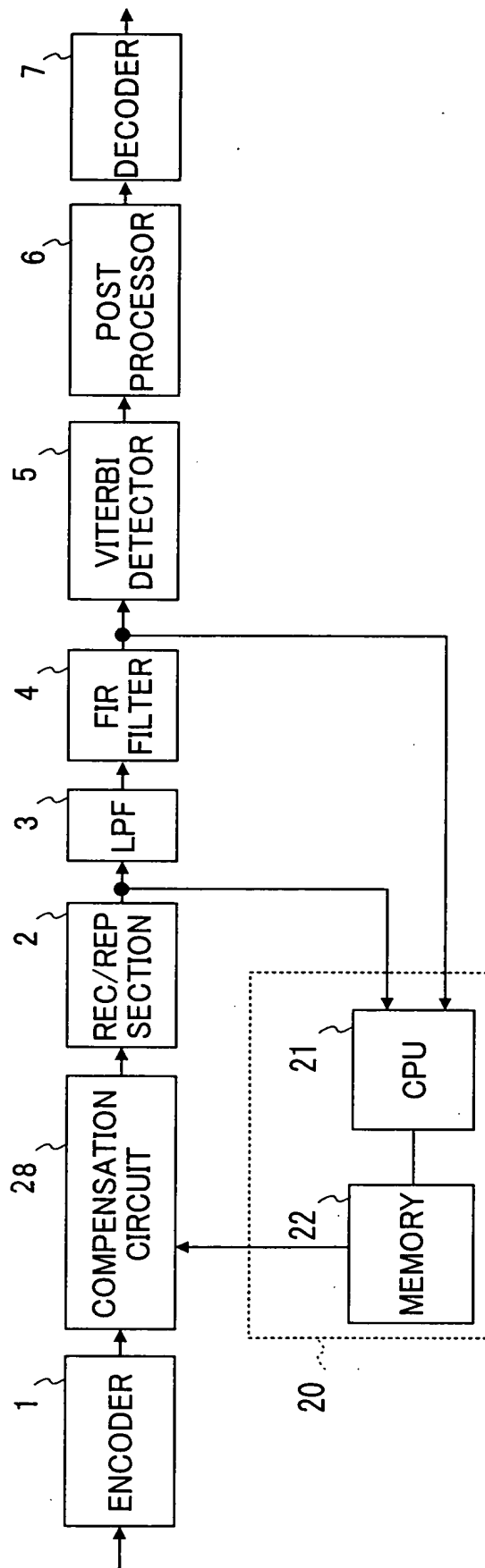


FIG. 15

FIG. 15

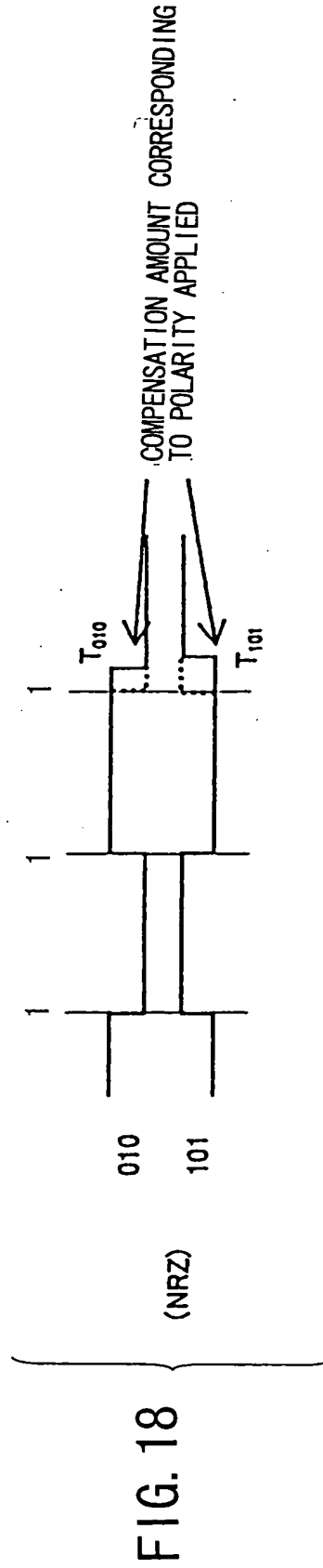
FIG.16





**FIG.17**

$a_{k-l}$	$\dots$	$a_k$	$\dots$	$a_{k+l}$	POLARITY	COMPENSATION AMOUNT
$0$	$\dots$	$1$	$\dots$	$0$	$+$	$T_{0\dots 1\dots 0+}$
	$\dots$		$\dots$		$-$	$T_{0\dots 1\dots 0-}$
$\dots$	$\dots$	$\dots$	$\dots$	$\dots$	$\dots$	$\dots$
$1$	$\dots$	$1$	$\dots$	$1$	$+$	$T_{0\dots 1\dots 1+}$
	$\dots$		$\dots$		$-$	$T_{0\dots 1\dots 1-}$



102000-1112000

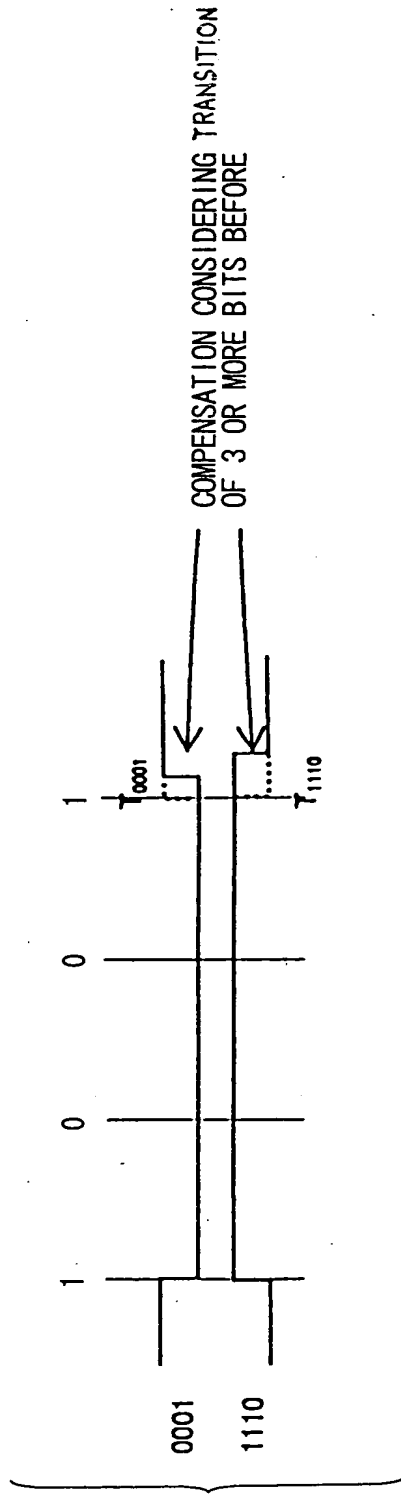


FIG. 19

FIG. 19

FIG.20

RECORDING SEQUENCE					AVERAGE VALUE $w(t)$ ( $-1 \leq t \leq 1$ ) OF OVER-SAMPLED REPRODUCED OR EQUALIZED WAVEFORM						
$a_{k-1}$	$\dots$	$a_k$	$\dots$	$a_{k+1}$	POLARITY	$w(-1)$	$\dots$	$w(0)$	$\dots$	$w(1)$	$\dots$
0	$\dots$	1	$\dots$	0	+	$W(-1)0\dots1\dots0+$	$\dots$	$W(0)0\dots1\dots0+$	$\dots$	$W(1)0\dots1\dots0+$	$\dots$
					-	$W(-1)0\dots1\dots0-$	$\dots$	$W(0)0\dots1\dots0-$	$\dots$	$W(1)0\dots1\dots0-$	$\dots$
0	$\dots$	1	$\dots$	0	+	$W(-1)0\dots1\dots1+$	$\dots$	$W(0)0\dots1\dots1+$	$\dots$	$W(1)0\dots1\dots1+$	$\dots$
					-	$W(-1)0\dots1\dots1-$	$\dots$	$W(0)0\dots1\dots1-$	$\dots$	$W(1)0\dots1\dots1-$	$\dots$
$\dots$	$\dots$	$\dots$	$\dots$	$\dots$	$\dots$	$\dots$	$\dots$	$\dots$	$\dots$	$\dots$	$\dots$
1	$\dots$	1	$\dots$	0	+	$W(-1)1\dots1\dots0+$	$\dots$	$W(0)1\dots1\dots0+$	$\dots$	$W(1)1\dots1\dots0+$	$\dots$
					-	$W(-1)1\dots1\dots0-$	$\dots$	$W(0)1\dots1\dots0-$	$\dots$	$W(1)1\dots1\dots0-$	$\dots$
1	$\dots$	1	$\dots$	1	+	$W(-1)1\dots1\dots1+$	$\dots$	$W(0)1\dots1\dots1+$	$\dots$	$W(1)1\dots1\dots1+$	$\dots$
					-	$W(-1)1\dots1\dots1-$	$\dots$	$W(0)1\dots1\dots1-$	$\dots$	$W(1)1\dots1\dots1-$	$\dots$

FIG. 21

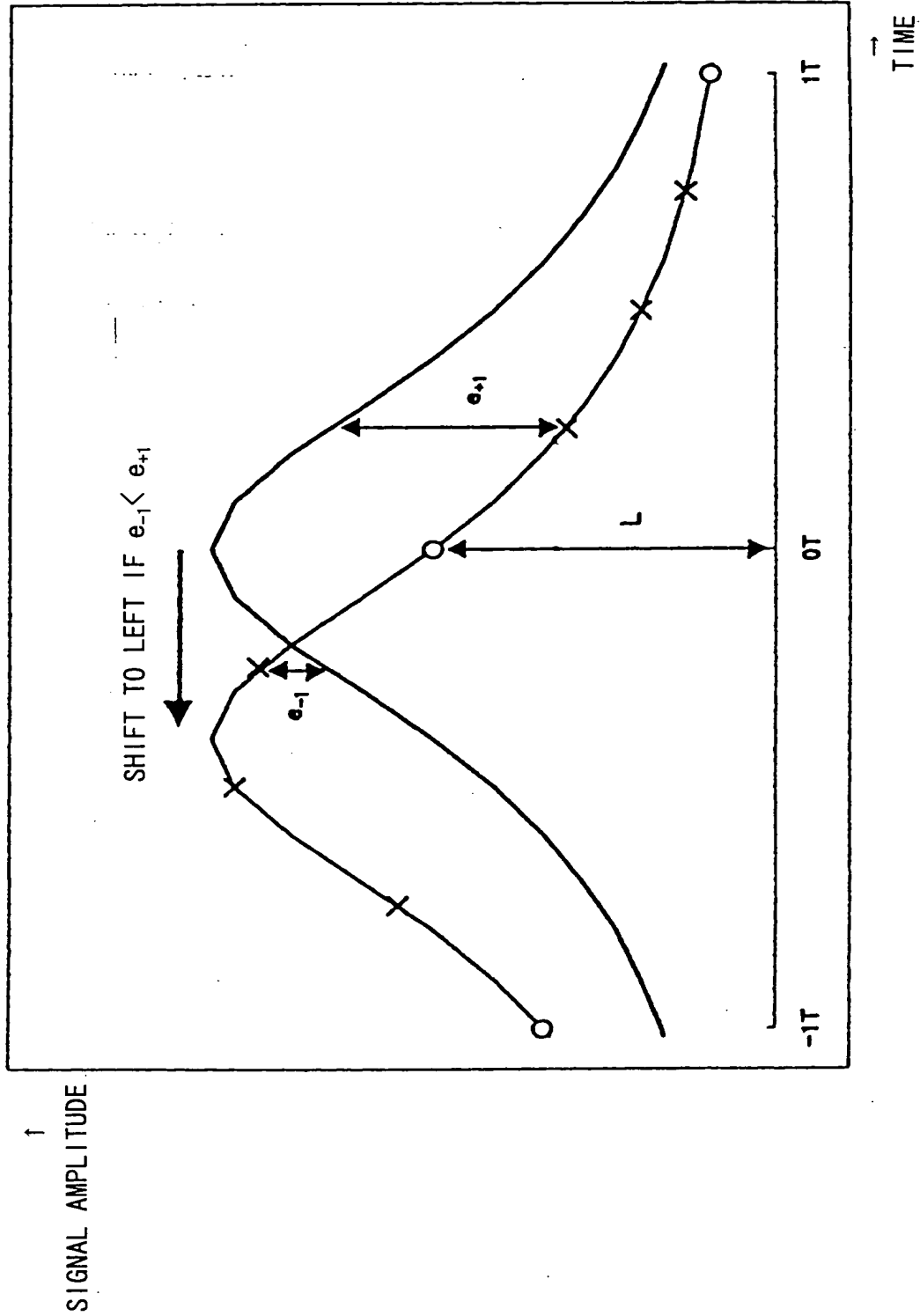


FIG. 22

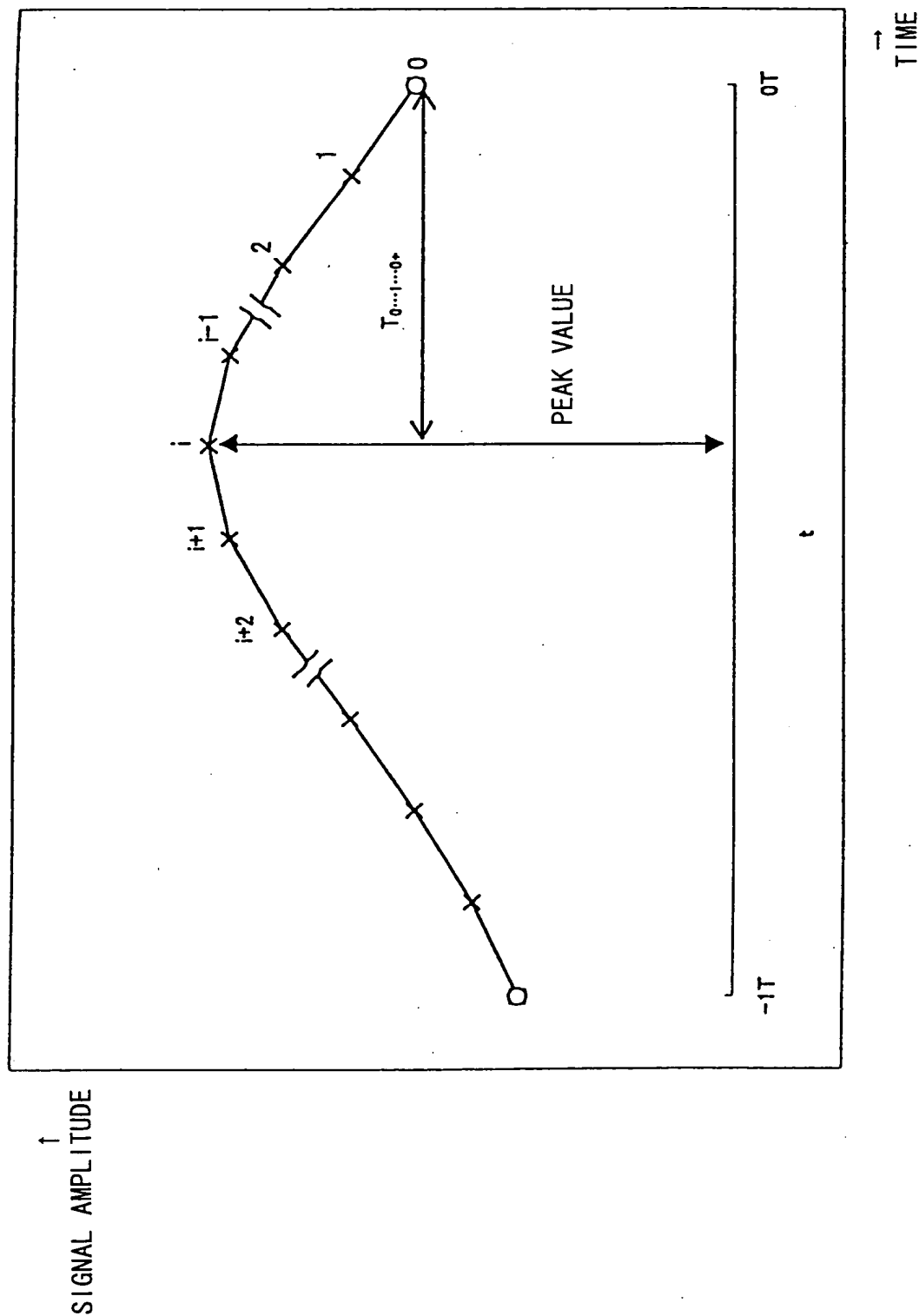


FIG. 23

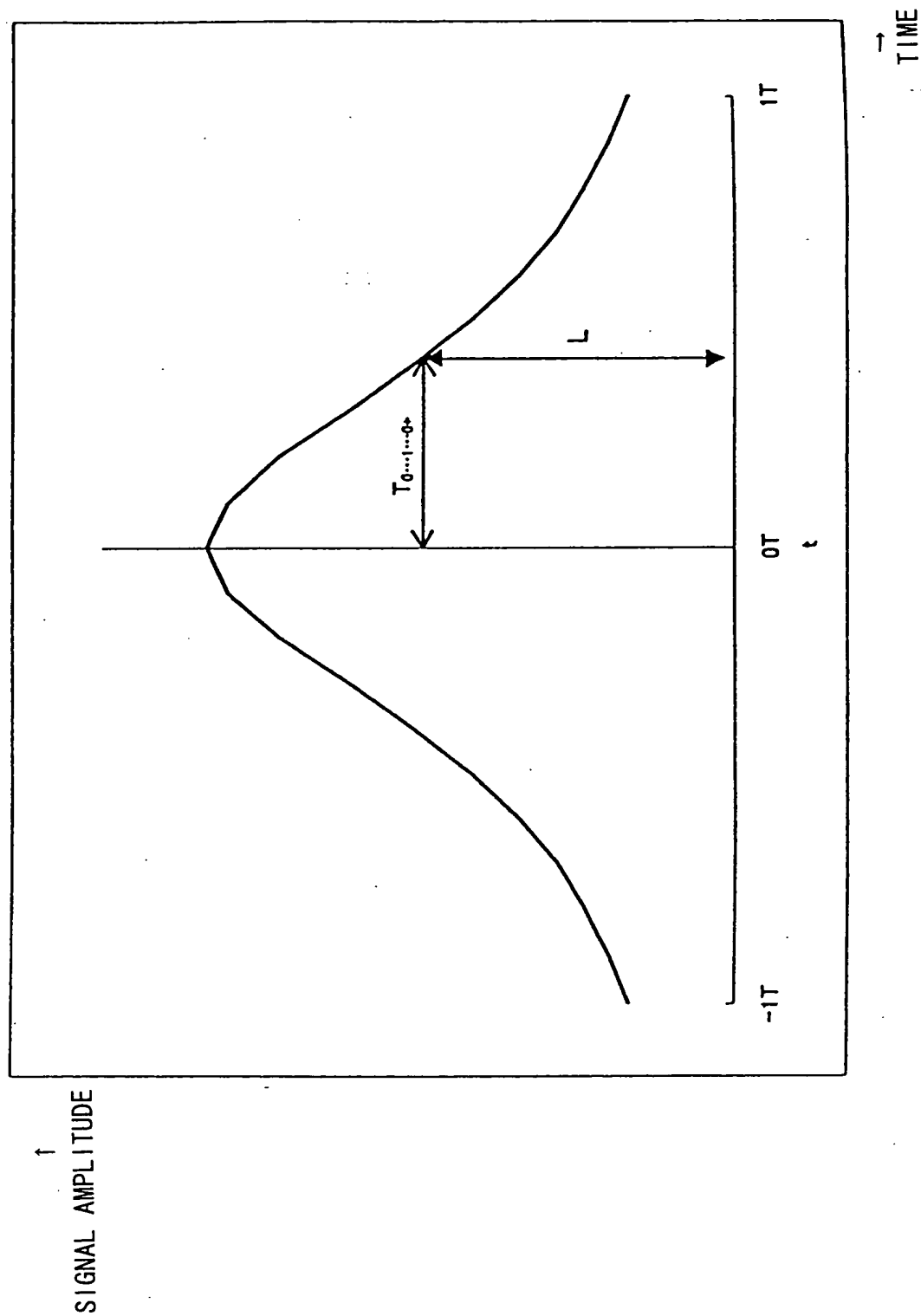


FIG.24

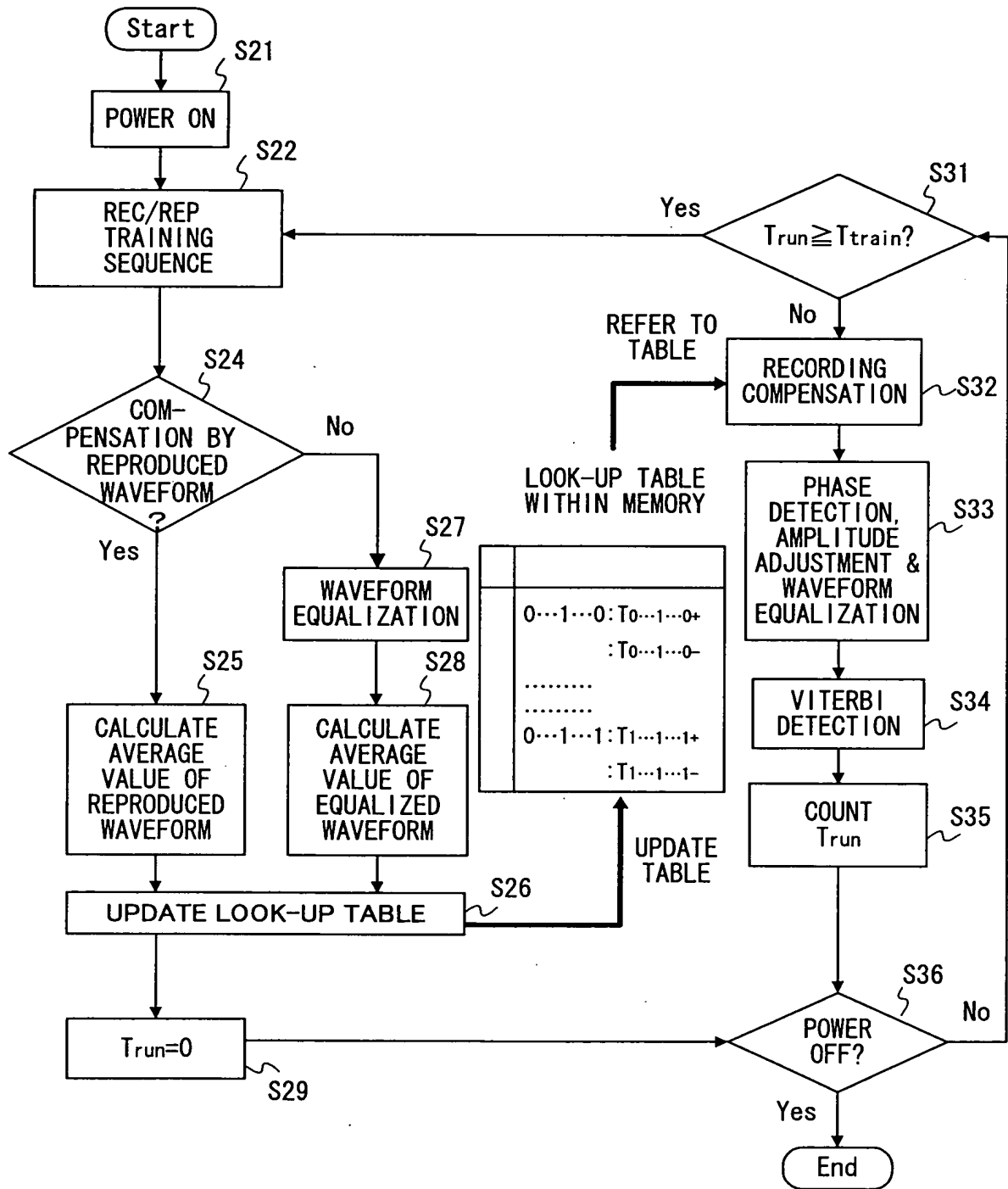




FIG.25

